

AMENDMENTS TO THE SPECIFICATION

Please amend the title as set forth below in marked-up form:

POWER SAVING DATA STORAGE CIRCUIT, DATA WRITING METHOD IN THE
SAME, AND DATA STORAGE DEVICE

Please amend paragraph 0027, beginning on page 7, line 31, as set forth below in marked-up form:

[0027] Furthermore, a control signal generating section for detecting a write signal so as to generate a control signal described below is provided in the data storage circuit. The write signal is a so-called write enable signal. By detecting the write signal in the control signal generating ~~signal~~section, the new data can be written to a predetermined storage element in accordance with a new data signal input from a new data input line connected to the data storage circuit.

Please amend paragraph 0032, beginning on page 9, line 2, as set forth below in marked-up form:

[0032] FIG. 1 is a block diagram showing a data storage circuit 1 according to this embodiment. The data storage circuit 1 includes: a storage section 3 having a storage element area 2 in which a plurality of storage elements M are appropriately arranged; a control signal generating section 4 for detecting a ~~write signal 6s~~write signal 7s that brings the storage section 3 into an input receiving state of new data; and a comparison section 5 for performing write control of the new data, which is stored in a predetermined one of the storage elements M of the storage section 3, to the storage element M in accordance with the detection of the ~~write signal 6s~~write signal 7s.

Please amend paragraph 0044, beginning on page 12, line 23, as set forth below in marked-up form:

[0044] In particular, with the detection of the write signal 7s, a readout control signal 16s and a ~~write control signal 7s~~write control signal 17s are generated in the control signal generating section 4 for detecting the write signal 7s in the data storage circuit 1. The readout control signal 16s is a control signal for performing reading-out of the existing data from the storage element M to which the new data is to be stored. The write control signal 17s is a control signal for performing writing of the new data to the storage element M.

Please amend paragraph 0077, beginning on page 21, line 6, as set forth below in marked-up form:

[0077] On the other hand, in the comparison between the new data signal 6s and the existing data signal 30s in the comparison section 5 (step S8), in a case where the new data signal 6s and the ~~existing~~existing data signal 30s are identical with each other, that is, in a case where the new data and the existing data are identical with each other, the comparison section 5 does not output the write enable signal 44s. The write processing is terminated while the storage section 3 does not write the new data to the predetermined storage element M.

Please amend paragraph 0081, beginning on page 22, line 3, as set forth below in marked-up form:

[0081] (1) In an embodiment of the present invention~~as described in claim 1~~, by providing a comparison section for reading out existing data stored in a storage element to compare the existing data and new data with each other prior to writing of the new data to the storage element, and configuring so that, in the comparison section, in a case where the exiting data and the new data are identical with each other, the writing to the storage element is not performed, and in a case where the existing data and the new data are not identical with each other, the new data is written to the storage element, it is possible to substantially reduce the number of times of execution of writing to the

storage element so that power consumption brought by the writing of the new data can be suppressed to accomplish power saving.

Please amend paragraph 0083, beginning on page 22, line 22, as set forth below in marked-up form:

[0083] (2) According to an embodiment of the invention~~as described in claim 2~~, by providing the data storage circuit with a control signal generating section for generating a readout control signal for performing readout control of the existing data and a write control signal for performing write control of the new data, and by configuring the data storage circuit so that the existing data and the new data are compared with each other in the comparison section in accordance with the control signal from the control signal generating section, the readout control signal and the write control signal generated with good accuracy can surely perform control of the data storage circuit and avoid erroneous operation to prevent excess power consumption. In particular, it is possible to adjust a time difference between the readout control signal and the write control signal generated with a predetermined time difference therebetween to be minimal so that the processing at the comparison section can be performed at high speed.

Please amend paragraph 0084, beginning on page 23, line 10, as set forth below in marked-up form:

[0084] (3) According to an embodiment of the invention~~as described in claim 3~~, by performing a readout process of existing data stored in a storage element prior to performing a write process of the new data to the storage element to compare the existing data and the new data with each other so as not to perform the writing to the storage element in a case where the exiting data and the new data are identical with each other and so as to perform writing of the new data to the storage element in a case where the existing data and the new data are not identical with each other, similarly to the

invention as described in claim 1, it is possible to substantially reduce the number of times of execution of writing to the storage element so that power consumption brought by the writing of the new data can be suppressed to accomplish a power saving because the writing is not performed in a case of the existing data and the new data being identical to each other.

Please amend paragraph 0085, beginning on page 23, line 28, as set forth below in marked-up form:

[0085] (4) According to an embodiment of the invention ~~as described in claim 4~~, by generating a readout control signal and a write control signal in accordance with a write signal input to the data storage circuit and by reading out the existing data in accordance with the readout control signal to compare the existing data with the new data in accordance with the write control signal, it is possible to perform the write processing of the new data immediately subsequent to the readout processing of the existing data so that processing speed can be improved and erroneous operation is avoided to prevent excess power consumption.

Please amend paragraph 0086, beginning on page 24, line 9, as set forth below in marked-up form:

[0086] (5) According to an embodiment of the invention ~~as described in claim 5~~, by providing a comparison section for reading out existing data stored in a storage element to compare the existing data and new data with each other prior to writing of the new data to the storage element, and configuring so that, in the comparison section, in a case where the ~~existing~~ existing data and the new data are identical with each other, the writing to the storage element is not performed, and in a case where the existing data and the new data are not identical with each other, the new data is written to the storage element, similarly to the invention as described in claim 1, it is possible to substantially reduce the number of times of execution of writing to the storage element so that power

consumption brought by the writing of the new data can be suppressed to accomplish a power saving.

Please amend paragraph 0087, beginning on page 24, line 25, as set forth below in marked-up form:

[0087] (6) According to an embodiment of the invention~~-as described in claim 6~~, by providing the data storage device with a control signal generating section for generating a readout control signal for performing readout control of the existing data and a write control signal for performing write control of the new data, and by configuring the data storage circuit so that the existing data and the new data are compared with each other in the comparison section in accordance with the control signal from the control signal generating section, similarly to the invention as described in claim 2, the readout control signal and the write control signal generated with good accuracy can surely perform control of the data storage circuit and avoid erroneous operation to prevent excess power consumption. In particular, it is possible to adjust a time difference between the readout control signal and the write control signal generated with a predetermined time difference therebetween to be minimal so that the processing at the comparison section can be performed at a high speed.

Please amend paragraph 0088, beginning on page 25, line 14, as set forth below in marked-up form:

[0088] (7) According to an embodiment of the invention~~-as described in claim 7~~, by providing the comparison section with a new data retention section for temporarily retaining the new data; an existing data retention section for temporarily retaining the existing data; and a write enable signal generating section for comparing the new data retained in the new data retention section and the exiting data retained in the existing data retention section with each other to control an output of the write enable signal, and configuring so that the new data is temporarily retained in the new data retention section

while the existing data is temporarily retained in the exiting data retention section in accordance with the readout control signal output from the control signal generating section so as to compare the new data retained in the new data retention section and the existing data retained in the existing data retention section with each other in accordance with the write control signal output from the control signal generating section, it is possible to compare the new data and the existing data after correctly obtaining them, respectively, so as to avoid an erroneous operation so that excessive power consumption can be prevented.